FREIGHT NEWS

# Freight Transportation Profile—West Virginia Freight Analysis Framework

Understanding future freight activity is important for matching infrastructure supply to demand and for assessing potential investment and operational strategies. To help decisionmakers identify areas in need of capacity improvements, the U.S. Department of Transportation developed the Freight Analysis Framework (FAF), a comprehensive national data and analysis tool, including county-to-county freight flows for the truck, rail, water, and air modes. FAF also forecasts freight activity in 2010 and 2020 for each of these modes. Information about the methodology used in developing FAF is available on the Office of Freight Management and Operations' website www.ops.fhwa.dot.gov/freight.

The U.S. freight transportation network moves a staggering volume of goods each year. Over 15 billion tons of goods, worth over $9 trillion, were moved in 1998. The movement of bulk goods, such as grains, coal, and ores, still comprises a large share of the tonnage moved on the U.S. freight network. However, lighter and more valuable goods, such as computers and office equipment, now make up an increasing proportion of what is moved. FAF estimates that trucks carried about 71 percent of the total tonnage and 80 percent of the total value of U.S. shipments in 1998. By 2020, the U.S. transportation system is expected to handle about 23 billion tons of cargo valued at nearly $30 trillion.

## West Virginia

Table 1 presents information on freight shipments that have either an origin or a destination in West Virginia. As shown in the table, rail moved a large percentage of the tonnage, followed by trucks. Trucks moved most of the high-value shipments. Figures 1 and 2 show freight flows on the highway and rail modes.

Truck traffic is expected to grow throughout the state over the next 20 years. Much of the growth will occur in urban areas and on the Interstate highway system (Figures 3 and 4). Truck traffic moving to and from West Virginia accounted for 14 percent of the average annual daily truck traffic (AADTT) on the FAF road network. Approximately 7 percent of truck traffic involved in-state shipments, and 42 percent involved trucks traveling across the state to other markets. About 37 percent of the AADTT were not identified with a route-specific origin or destination.

Table 2 shows the top five commodity groups shipped to, from, and within West Virginia by all modes. As expected, the top commodity by weight is coal. By value, the top commodities are chemicals or allied products and secondary traffic. Secondary traffic is defined as freight flows to and from distribution centers or through intermodal facilities. No commodities are assigned to this intermediate step in the transportation process.

**Table 1. Freight Shipments To, From, and Within West Virginia: 1998, 2010, and 2020**

| WEST VIRGINIA | Tons (millions) | | | Value (billions $) | | |
|---|---|---|---|---|---|---|
| | 1998 | 2010 | 2020 | 1998 | 2010 | 2020 |
| **State Total** | 348 | 447 | 504 | 92 | 170 | 265 |
| | | | | | | |
| **By Mode** | | | | | | |
| Air | <1 | <1 | <1 | <1 | 1 | 2 |
| Highway | 103 | 149 | 185 | 81 | 153 | 241 |
| Other[a] | <1 | <1 | <1 | <1 | <1 | <1 |
| Rail | 176 | 212 | 225 | 7 | 11 | 15 |
| Water | 70 | 86 | 94 | 3 | 5 | 8 |
| | | | | | | |
| **By Destination/Market** | | | | | | |
| Domestic | 311 | 398 | 450 | 87 | 161 | 248 |
| International | 37 | 49 | 54 | 5 | 9 | 17 |

Note: Modal numbers may not add to totals due to rounding.

[a] The "Other" category includes international shipments that moved via pipeline or by an unspecified mode.

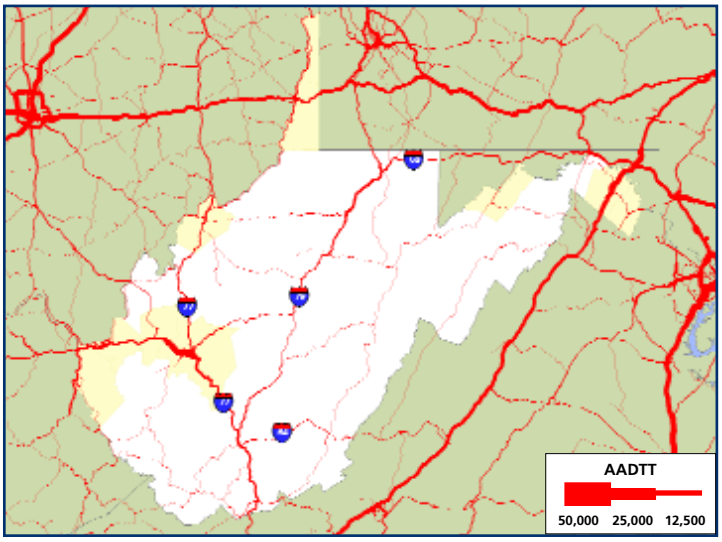
**Figure 1. Freight Flows To, From, and Within West Virginia by Truck: 1998 (tons)**


Federal Highway Administration

**Figure 2. Freight Flows To, From, and Within West Virginia by Rail: 1998 (tons)**

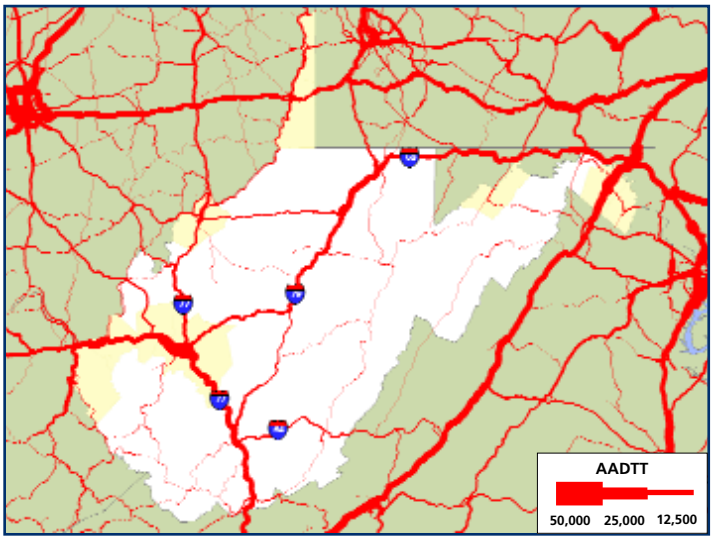

Federal Railroad Administration

**Figure 3. Estimated Average Annual Daily Truck Traffic: 1998**




Federal Highway Administration

**Figure 4. Estimated Average Annual Daily Truck Traffic: 2020**




Federal Highway Administration

**Table 2. Top Five Commodities Shipped To, From, and Within West Virginia by All Modes: 1998 and 2020**

| Commodity | Tons (millions) | | Commodity | Value (billions $) | |
|---|---|---|---|---|---|
| | 1998 | 2020 | | 1998 | 2020 |
| Coal | 222 | 282 | Chemicals/Allied Products | 20 | 50 |
| Nonmetallic Minerals | 21 | 27 | Secondary Traffic | 15 | 61 |
| Chemicals/Allied Products | 18 | 30 | Transportation Equipment | 13 | 30 |
| Petroleum/Coal Products | 17 | 21 | Primary Metal Products | 6 | 14 |
| Secondary Traffic | 14 | 39 | Fabricated Metal Products | 5 | 14 |

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A series of FAF products are available on the website noted below. FAF outputs include freight flow maps for states, modes, and gateways; detailed databases on traffic flows and commodity movements; information on the methodologies used to develop FAF; and forecast assumptions.

The U.S. Department of Transportation, Bureau of Transportation Statistics (BTS) is also developing a series of state transportation profiles. For more information and to obtain a copy of the BTS reports, please call 202-366-DATA.

U.S. Department of Transportation

**Federal Highway Administration**